UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,451	04/02/2001	Arthur Francis Champernowne	EXINM117029	1798

26389 7590 01/17/2007

CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC
1420 FIFTH AVENUE
SUITE 2800
SEATTLE, WA 98101-2347

EXAMINER	
MOONEYHAM, JANICE A	
ART UNIT	**PAPER NUMBER**
3629	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/825,451	CHAMPERNOWNE, ARTHUR FRANCIS	
	Examiner	Art Unit	
	Janice A. Mooneyham	3629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-18,20-30 and 32-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-6, 8-18, and 20-30 and 32-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This in response to the applicant's communication filed on August 21, 2006, wherein:

Claim 1-6, 8-18, 20-30, and 32-36 are currently pending;

Claims 1, 13, and 25 have been amended;

Claims 7, 19, and 31 have been cancelled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6, 8-18, 20-30, and 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMarcken et al. (US Patent No. 6,295,521) (hereinafter referred to a DeMarcken) in view of Keller et al (US 6,304,850) (hereinafter referred to as Keller)

Referring to Claims 1, 13, and 25:

DeMarcken discloses a method and system for finding at least one best fare for a trip, comprising:

a system wherein a scheduler process (16) provides itineraries to a faring process (18) which produces a set of pricing solutions (38), and then an availability system (58) uses airline inventory database (20b) as a filter to remove from the set of pricing solutions those solutions for which seats are not available (col. 5, lines 1-12);

at the query server computer, in response to a fare query received from the client application (col. 1, lines 48-56, col. 3, line 55 thru col. 4, line 41, Figs. 2-3, 18, 19) determining a set of partial fare solutions for the trip (Figs 1-18, col. 51 – Finding the Best Price, see line 26-29 – (partial) pricing solutions, col. 55, lines 51-56);

adding trip information to the partial fare solutions in order to define a set of complete fare solutions for the trip (Figs.19-27, col. 4, lines 43-51, col. 5, lines 1-4, see also, col. 49, lines 30-44, col. 51, lines 35-55, Fig. 3);

as trip information is added to the partial fare solutions, eliminating partial fare solutions that are non-optimal partial solutions (col. 5, lines 4-6- see also, col. 49, line 30 thru col. 50, line 39, Fig. 19, col. 2, lines 27-37, col. 53, line 25 thru col. 54, line 34, col. 55, lines 48-62); and

returning a subset of said complete fare solutions as the best fares for the trip (Fig. 19, col. 1, line 46 thru col. 2, line 51, col. 49, lines 30-59, col. 51- Finding the Best Pricing Solution, col. 55 47-62).

DeMarcken discloses a process including a manipulation process that manipulates the set of pricing solutions in the form of the directed acyclic graph representation in response to user preferences, the manipulation process including a pruning process responsive to user preferences that alters the directed acyclic graph representation in such a manner so as to eliminate undesirable pricing solutions (col. 2, lines 27-37). Demarken does not disclose that the partial fare solutions are eliminated based on threshold cost.

However, Keller discloses a method and apparatus for purchasing an airline ticket including entering into the computer information describing a flight desired by a consumer, including a target price (considered to by Examiner to be a threshold cost) and determining whether a flight found during the search has a fare that is at least equal to the target price (Figure 1 (103), Figure 4 (402) and Figure 6 (604) col. 1, line 66 thru col. 2, lines 27). Keller further discloses that is known that a consumer can specify a price at which she is willing to purchase an airline ticket for travel (col. 1, lines 30-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate into the travel planning method and system of DeMarcken the ability to determine if a fare is at least equal to the target price as taught in Keller so that customers are able to purchase airline travel tickets at the best possible price and allow the customer to set their own price for airline travel.

Furthermore, the Examiner asserts that eliminating fares based on a threshold cost is old and well known practice in the field of airline reservations as shown in WO 00/13124 (a determination is then made as to whether price information associated with each item in the set substantially satisfies the target price (abstract and page 3 lines 3-11) and E-booking Takes Off (page 3 After you select a destination and maximum fare, a map appears showing the fares on the major routes that fall below your target fare).

Referring to Claims 3, 15, and 27:

DeMarcken discloses the method and system of claims 1, 13 and 25, wherein said subset of complete fare solutions is a predetermined number of lowest cost fare solutions (col. 2, lines 31-37, col. 4, lines 30-41, col. 5, lines 18-20 (solutions are

arranged according to price) col. 6, lines 16-19, see also col. 28, line 60 thru col. 29, line 3, col. 29, lines 63-67- deferred rules, Fig. 4B, Fig. 19, it can be inferred that a subset can have a predetermined number of lowest cost fare solutions, col. 49, lines 30-59, col. 51, lines 3-55, col. 52- Finding Minimum Value).

Referring to Claims 9, 10, 21, 22, 33, and 34:

DeMarcken discloses the method and system of claims 1, 13 and 25 wherein said partial fare solutions are stored in a priority queue, said complete fare solutions are retrieved from a priority queue (cols. 55-61–Enumerating Pricing Solutions).

Referring to Claims 4, 16 and 28:

Demarcken discloses wherein said subset of complete fare solutions is an exhaustive set of said complete fare solutions (pricing solutions provided by DeMarcken to the consumer include all of the partial fare solutions for which seats are available (col. 5, lines 18-20). As set forth in the Board decision dated June 21, 2006, the subset of the partial fare solutions is an exhaustive set of the complete fare solutions, i.e., the pricing solutions (page 7 of Board decision).

Referring to Claims 5, 17, and 29:

DeMarcken discloses wherein adding trip information and eliminating partial fare solutions are performed in a recursive manner (Recursive means "of, relating to, or constituting a procedure that can repeat itself indefinitely or until a specified condition is met." DeMarcken discloses an availability system that uses the airline inventory database (20b) as a filter until each pricing solution for which seats are unavailable has been removed (col. 5, lines 10-13). Thus, the process is repeated until a specified

condition is met, i.e., all the pricing solutions for which seats are unavailable have been remover, therefore performing the process in a recursive manner.

Referring to Claims 6, 18, and 30:

DeMarcken discloses wherein adding trip information and eliminating partial fare solutions are performed in an iterative manner (col. 5, lines 10-13 – process of removing pricing solutions for seats that are unavailable, the desired result of removing pricing solutions for which seats are unavailable is approximated more and more closely (Iterative meaning relating or being a computational procedure in which replication of a cycle of operations produces results which approximate the desired result more and more closely- see pages 7-8 of Board decision).

Referring to Claims 8, 20, and 32:

DeMarcken discloses wherein said partial fare solutions are eliminated based on a refined lower bound (availability of at least one seat – see Board decision pages 7-9).

Referring to Claims 11, 23, and 35:

DeMarcken discloses wherein adding trip information and eliminating partial fare solutions are performed as part of a branch-and-bound best fare search routine (Figures 3A-3B, col. 1, lines 57-65, col. 2,lines 17-51)

Referring to Claims 12, 24, and 26:

DeMarcken discloses wherein adding trip information and eliminating partial fare solutions are performed both backward and forward from a destination and origin (col. 1, lines 48-65 (travel request information would include destination and origin; col. 2, lines 17-51).

3. Claims 2, 14, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMarcken.

Referring to Claim 2, 14, and 26:

DeMarcken discloses the method and system of claims I, 13, and 25, wherein adding trip information comprises:

supplying a fare query to a root node in a solution tree (col. 1, lines 46-65, col. 7, lines 16-18, Figs. 2 (48), 3, 3A, 3B, see also, col. 5, lines 36-45);

assigning fare components corresponding to said root node to a plurality of nodes (Figs. 2 - faring process (18), 3, 3A, 3B, , col. 1, line 46-65, col. 2, lines 38-51, col. 15, lines 55-66 Fig. 3A);

assigning at least one carrier corresponding to said nodes to a plurality of nodes (Fig. 3A (UA (United Airline, NW (North West), Fig. 6, (114);

assigning at least one flight corresponding to said nodes to a plurality of nodes (Fig. 3, US Bos –LAX Rt QE7NR, Bos-San UAA515), Fig. 2, scheduler processor (16), col. 3, lines 55-66, see also, col. 14, lines 1-6);

assigning at least one priceable unit corresponding to said nodes to a plurality of nodes (pricing solution, col. 3, lines 55-66); and

assigning at least one fare corresponding to said nodes to a plurality of leaf nodes (Fig.3A, 3B, Fig. 4A (fares or each faring atom, Col. 10 – The Faring System-Fig. 19).

DeMarcken does not disclose assigning the fare components to a plurality of first nodes, at least one carrier to a plurality of second nodes, at least one flight

corresponding to a plurality of third nodes, assigning at least one pricable unit to a plurality of fourth nodes, and assigning at least one fare corresponding to a plurality of leaf nodes.

However, Demarcken discloses a data structure comprising a plurality of nodes that can be logically manipulated using value functions and a graph that contains nodes that can be logically manipulated or combined to extract a plurality of pricing solutions. (col. 2, lines 38-51). It would have been obvious to ordinary skill in the art to arrange DeMarcken's method and system to include the assignment of nodes as set forth in Claim 2, 14, 26 since DeMarcken 's system and method discloses a data structure comprising a plurality of nodes which can be logically manipulated or combined and this would include assigning the nodes as set forth Claims 2, 14, and 26.

Response to Arguments

Applicant's arguments filed August 21, 2006 have been fully considered but they are not persuasive.

The applicant states that in light of the Board's decision with regard to the pending claims, applicant has amended claims the subject matter of claims 7, 19, and 31. Applicant states that it is in regard to these claims which the Board overturned the prior rejections concluding that the cited references fail to disclose these elements.

However, with respect to claims 7, 19, and 31, the Board stated that the Sabre reference's priority date was not available as prior art. Therefore, the Examiner has provided a new reference for the limitations of claim 7, 19, and 31, eliminating partial fare solutions based upon threshold cost.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janice A. Mooneyham whose telephone number is (571) 272-6805. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on (571) 272-6812. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAN MOONEYHAM
PRIMARY EXAMINER
TECHNOLOGY CENTER 3600